

Edistir® ICE S 900

High Impact Polystyrene

Versalis S.p.A.

Message:

Very high environmental stress cracking resistant (VH ESCR) HIPS.

ICE S 900 exhibits high toughness and excellent chemical resistance to oils, fats and chemical agents and in particular to cyclopentane.

Suitable for extrusion / thermoforming and injection moulding.

Designation: Thermoplastics ISO 2897-PS-I,G,093-03-07-12

Applications

Designed for inner liners and frames for refrigerators where cyclopentane is used as blowing agent for insulating polyurethane foams.

ICE S 900 significantly improves the wall thickness distribution in thermoforming and allows to optimize the thickness of the original extruded sheet.

General Information			
Features	High ESCR (Stress Cracking Resistance)		
	Impact resistance, high		
	Good chemical resistance		
	Detergent resistance		
	Oil resistance		
	Compliance of Food Exposure		
Uses	Lining		
	Low temperature application		
	Industrial application		
	Home appliance components		
	Insulating material		
	Foam		
	Food packaging		
	Food container		
Agency Ratings	Europe No 10/2011		
Forms	Sphere		
Processing Method	Extrusion		
	Thermoforming		
	Injection molding		
Physical	Nominal Value	Unit	Test Method
Density	1.05	g/cm ³	ISO 1183
Apparent Density	0.65	g/cm ³	ISO 60
Melt Mass-Flow Rate (MFR) (200°C/5.0 kg)	2.5	g/10 min	ISO 1133
Molding Shrinkage	0.40 - 0.70	%	Internal method
Water Absorption (23°C, 24 hr)	< 0.10	%	ISO 62
Mechanical	Nominal Value	Unit	Test Method

Tensile Modulus	1450	MPa	ISO 527-2/1
Tensile Stress			ISO 527-2/50
Yield	17.5	MPa	ISO 527-2/50
Fracture	25.0	MPa	ISO 527-2/50
Tensile Strain (Break)	70	%	ISO 527-2/50
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact (23°C)	11	kJ/m ²	ISO 180/1A
Thermal	Nominal Value	Unit	Test Method
Vicat Softening Temperature	92.0	°C	ISO 306/B50
CLTE - Flow	9.0E-5	cm/cm/°C	ASTM D696
Thermal Conductivity	0.17	W/m/K	ISO 8302
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	> 1.5E+15	ohms	IEC 60093
Volume Resistivity	> 7.0E+15	ohms·cm	IEC 60093
Dielectric Strength	65	kV/mm	IEC 60243-1
Dielectric Constant (50 Hz)	2.50		IEC 60250
Dissipation Factor (50 Hz)	3.0E-4		IEC 60250
Comparative Tracking Index (Solution A)	500	V	IEC 60112
Flammability	Nominal Value	Unit	Test Method
Flame Rating (1.50 mm, Internal testig)	HB		UL 94
Glow Wire Ignition Temperature (1.60 mm)	650	°C	IEC 60695-2-13
Injection	Nominal Value	Unit	
Processing (Melt) Temp	210 - 260	°C	
Mold Temperature	20.0 - 60.0	°C	
Injection instructions			
Predrying normally not required			
Extrusion	Nominal Value	Unit	
Melt Temperature	210 - 240	°C	

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